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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/899,628	07/05/2001	Dae-Gyun Kim	678-704(P9825)	5139

7590 12/15/2004  
Paul J. Farrell, Esq.  
DILWORTH & BARRESE, LLP  
333 Earle Ovington Blvd.  
Uniondale, NY 11553

EXAMINER
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LEE, CHI HO A

ART UNIT	PAPER NUMBER
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2663

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/899,628

Applicant(s)

KIM ET AL.

Examiner

Andrew Lee

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 July 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re Claim 19, it is unclear what is meant by “a low service priority is given to AT having a high service priority more than predetermined times.”. It appears that the “a high service priority AT” is reassigned to “a lower priority” after a predetermined time period or a number of time as “being assigned as a high service priority”. However, as recited, it is unclear what is the priority of the AT because it is both “a low service priority and a high priority AT”. Applicant is requested to reference the specification so metes and bounds can be determined.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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4. Claims 1-18, 20-35, 37-46 are rejected under 35 U.S.C. 102(e) as being anticipated by Laakso U.S. Patent Number 6,671,512.

Re Claims 1, 8, 30, Laakso teaches calculating the total load by measuring interference from all uplink connections to the BS (See col. 11, lines 30-60). The Scheduler Means in the base station calculates the  $P_{rxNrt}$  and  $P_{txNrt}$  in connection basis of each NRT users (calculating a load share of each AT) in determining the total load to the Base station wherein the uplink rate (reverse data rate) based on the  $P_{rxTotal}$  (total load for NRT users) having exceeded the  $E_b/N_0$  target value associated with the NRT user (individually selected for the AT) (See col. 13, lines 44-64 & col. 14, lines 15-43).

Re Claims 2, 9, 16, 40, refer to Claim 1, wherein the transmission rate is increased/decreased based on the comparison between the total load and the predetermined threshold for each RT and NRT users.

Re Claims 3, 10, 17, refer to Claim 1, wherein the biggest load factor  $L_{Uplink}$  is reduce according (See col. 14, lines 1-5) (ascending order).

Re Claims 4, 11, 18, refer to Claim 1, wherein the adjustment is based on the priority of (descending order) the NRT/RT traffic users and it's associated data rates.

Re Claims 5, 12, 20, 37, refer to Claim 1, wherein the total energy received by the base station is inherently dependent on the total number of traffic users (the volume of data received from the plurality of ATs).

Re Claims 6, 13, 21, 38, refer to Claim 1, wherein the total energy inherently includes a energy received from adjacent cells.

Re Claims 7, 14, 22, 39, refer to Claim 1, wherein thermal noise is interference.

Re Claim 15, refer to Claim 1, wherein base station compares the total load and the total capacity of uplink and the RNC modifies the predetermined Power estimate in the base station (AN) based on result of the total load of the Uplink channel (controlling the thresholds) (See col. 11, lines 1-30 & also Col. 16, lines 30-55).

Re Claim 23, refer to Claim 15, wherein the Target threshold level is different for RT and NRT traffic users (thresholds are determined separately for each AT).

Re Claims 24, 25, 41, 42, refer to Claim 23, wherein the adjustment function has a value of (0.5dB) (a value less than 1) (See col. 14, lines 15-43).

Re Claims 26-29, 32, 43-46 refer to Claims, 15, 24, wherein the modified threshold from initial threshold (value) in the base station (the variable is decreased) varied up to a predetermined capacity as set by the network operator, wherein the threshold is modified to return the total load experience at the Base station at an acceptable level (the variable is set to a larger/smaller value) (See col. 14, lines 53-68 & col. 16, lines 24-56).

Re Claims 31-35, refer to Claims 15, 3, 4, wherein the BS supports CDMA, hence it is inherent the transmitter in the Base station to include a spreader and a rate generator, wherein the determined and adjusted reverse link is based on the total load and the target threshold value.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 19 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laakso U.S. Patent Number 6,671,512 in view of Rostoker et al U.S. Patent Number 6,111,863.

Re Claims 19 and 36, Laakso fails to explicitly teach "generator assigns a low service priority to an AT having a higher service priority greater than a predetermined number of times.". However, Rostoker teaches in a CDMA system, the priority assignment can be changed whereby the video signal is transmitted over the entire RF bandwidth until the video buffer is empty (a predetermined number of times) (See col. 4, lines 48-68). In so doing, the high video quality can be enhanced. Hence, depending on the request, the fidelity of the selected data type can be improved. One skilled in the art would have been motivated by Rostoker to change the priority of the AT in Laakso to provide quality video communication capability to a RF communication system. Therefore, it would have been obvious to one ordinary skilled to combine the teaching of Rostoker et al into the teaching of Laakso.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S. Patent Number 6,339,697 adjusts the transmission rate based on the Interference threshold level (See figures 2 and 3);

U.S. Patent Number 6,594,495 teaches the hardware detail for controlling the transmission rate at the base station based on load control.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Lee whose telephone number is 571-272-3130. The examiner can normally be reached on Monday to Friday from 8:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 571-571-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AI   
12/08/04 ANDY LEE  
PATENT EXAMINER